

IN THE CLAIMS:

1. (currently amended) A wafer conveyance system for transporting one or more wafers that undergo, while being transported, different processes at a plurality of wafer processing apparatuses, ~~each wafer processing apparatus defining a self-contained environment in its inside which provides a controlled atmosphere in which one or more wares are processed,~~ the wafer conveyance system comprising:

G, (a) a hermetically closed chamber that ~~provides~~ defines an isolated environment inside which provides a controlled atmosphere ~~that is in communication with the inside of each wafer processing apparatus through a passage;~~

(b) at least one guide path provided inside the hermetically closed chamber;

(c) a plurality of ducts that each communicate the isolated environment of the hermetically closed chamber with the inside of one wafer processing apparatus such that the hermetically closed chamber is in communication with one or more wafer processing apparatuses;

(ed) at least one mobile element being movable inside the hermetically closed chamber along the guide path to transport one or more wafers from one wafer processing apparatus to another; and

(de) at least one arm provided on each mobile element, each arm being accessible to the inside of each wafer processing apparatus through a corresponding passage duct to load one or more wafers into a wafer processing apparatus and unload the same therefrom.

2. (original) A conveyance system in accordance with claim 1, wherein said mobile element is driven by a linear motor.

3. (previously amended) A conveyance system in accordance with claim 1, wherein said guide path comprises a first magnetic field generating element for generating a magnetic field; and said mobile element comprises a second magnetic field generating element for generating a magnetic field, forming a linear motor in conjunction with said first magnetic field generating element, and conferring a propulsive force to said mobile element.

4. (previously amended) A conveyance system in accordance with claim 2, further comprising a power supply element provided along said guide path; wherein an electric power is supplied to said mobile element by means of said power supply element.

5. (previously amended) A conveyance system in accordance with claim 4, wherein said power supply element comprises a lain electric cable or electric coil provided along said guide path, and an electricity receiving element provided on said mobile element for receiving the electric power supplied to said electric cable or electric coil without contact, whereby electric power is supplied to said mobile element without contact.

6. (original) A conveyance system in accordance with claim 2, further comprising:
a control element for generating control data for controlling the operations of said mobile element;
a communication element provided on said mobile element for performing data communication between said control element and said mobile element; and
a mobile element control unit provided on said mobile element for controlling operations of said mobile element based on the control data supplied from said control element through said communication element.

7. (previously amended) A conveyance system in accordance with claim 6, wherein said control element supplies electrical signals containing control data to ~~(the electric cable)~~ or electric coil provided along said guide path; and said communication element receives the electrical signals containing control data supplied to ~~(said electric cable)~~ or electric coil by means of said control element.

8. (previously amended) A conveyance system in accordance with claim 6, wherein said communication element is an optical communication element, a radio communication element or a cable communication element provided alongside of said guide path.

9. (original) A conveyance system in accordance with claim 6, wherein said mobile element control unit is attached to said mobile element on the side of the direction of movement of said mobile element.

10. (previously amended) A conveyance system in accordance with claim 6, further comprising a position detecting element for detecting a position of said mobile element moving along said guide path; and said control element generates control data based on detection results of said position detecting element and wafer conveyance requests from said wafer processing apparatus.

6, 11. (previously amended) A conveyance system in accordance with claim 6, further comprising position detecting element for detecting a position of said mobile element moving along said guide path; and said mobile element control unit controls the operations of said mobile element based on detection results of said position detecting element and control the data supplied from said control element through said communication element.

12. (previously amended) A conveyance system in accordance with claim 10, wherein said position detecting element comprises a plurality of mobile element detecting sensors placed along said guide path, and said mobile element detecting sensors are placed at regular distance intervals throughout the guide path or placed at narrower intervals near the wafer processing apparatuses than along midways between adjacent two wafer processing apparatuses.

13. (previously amended) A conveyance system in accordance with claim 1, wherein the degree of air purity in said chamber is higher than the degree of purity outside said chamber.
